REPORT GENERATOR FOR A MATHEMATICAL COMPUTING ENVIRONMENT

ABSTRACT OF THE DISCLOSURE

5   A method and apparatus, including a computer program apparatus, implementing techniques for generating a report from a technical computing environment provided by a mathematical computer program. A report generator defines a set of reporting components that can be assembled to form a report template and processes the reporting components of the report template in order to extract data from the mathematical computing environment

10   and generate the report. The report generator includes a user interface by which a designer can hierarchically assemble the reporting elements, which are defined according to an object-oriented programming language. The report generator bi-directionally communicates with the mathematical computing environment such that the report generator can evaluate expressions defined within the mathematical computing environment, change initial

15   conditions and parameters of a mathematical model, and issue commands to advance the state of the model. The report generator includes a generation engine that generates an intermediate representation of the report and a transformation engine that transforms the intermediate representation into an electronic document according to a user-selected format.